

As machines replaced horses, people naturally estimated the power of a machine by how many horses it could replace. Today, engines are still rates in terms of horsepower.

1 HORSEPOWER = 1 HORSE LIFTING 550 LBS, 1 FOOT PER SECOND

Can you do the work of one horse? Use the equation to calculate how much horsepower you generate by running up a flight of stairs.

Work = force x distance Power = work divided by time

1. Find a partner.
2. Take turns running up a flight of stairs and recording the data in the table below. Each person must complete three trials.
3. Use the data to calculate how much horse power you can generate by running up a flight of stairs.

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| --- | --- | --- | --- | --- | --- | --- | --- |
| Trial | Height of Step x # of Steps | X | Weight of person running up the stairs |  | Time it took the person to run up the stairs | = | Horsepower |
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